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In the claims:

Claims 1-16 cancelled.

17.   (Previously presented) A method of synchronizing at least one or more receivers to a transmitter within a transmission system with the use of a data stream with guard intervals, comprising the steps of inserting with the transmitter a special synchronization train into the data stream at a beginning of a transmission, which train is capable of estimating a chronological position of a signal to be received and/or estimating a center frequency error between the transmitter and the receiver; forming the synchronization train of at least two different symbol sequences which are transmitted in alternation periodically; ascertaining the chronological position of the signal and/or the center frequency error between the transmitter and the receiver from a composite term of various symbol sequences within a predetermined interval; for a block synchronization using total metrics of at least two different symbol sequences used as the synchronization train; and selecting as a beginning of a block, whichever index minimizes the total metrics within the predetermined interval.

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18. (Previously presented) A method as defined in claim 17;
and further comprising providing in an OFDM transmission symbol the
symbol sequences comprising OFDM symbols, which have same lengths
as or different lengths from a conventional data symbol.

19. (Previously presented) A method as defined in claim 17;
and further comprising transmitting the symbol sequences at least in pairs
in each case in alternation.

20. (Previously presented) A method as defined in claim 17,
wherein when there are more than two different symbol sequences, further
comprising putting at least one symbol sequence as a pair together with a
spacing from at least one further pair of another symbol sequence to form
the synchronization train.

21. (Previously presented) A method as defined in claim 20;
and further comprising providing guard intervals in front of the individual
pairs of symbol sequences.

22. (Previously presented) A method as defined in claim 17;
and further comprising, for a block synchronization, using total metrics of

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at least two different symbol frequencies used as the synchronization train, and as a beginning of a block selecting whichever index minimizes the total metrics within the predetermined interval.

23. (Previously presented) A method as defined in claim 17; and further comprising determining the predetermined interval by a frame structure of the data stream.

24. (Previously presented) A method as defined in claim 17; and further comprising for estimating the center frequency error, ascertaining a phase rotation of two adjacent identical signal segments at a time.

25. (Previously presented) A method as defined in claim 24; and further comprising ascertaining phase rotations of other identical signal portions, and estimating a total center frequency error by averaging via the phase rotations thus obtained.

26. (Previously presented) A method as defined in claim 17; and further comprising utilizing the symbol sequences for channel estimation for a coherent demodulation, in that the symbol sequence after

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a frequency correction has been performed is subjected in the receiver to a fast Fourier transformation, and determining amplitudes and phase weights of individual subcarriers.

27. (Previously presented) A method as defined in claim 26; and further comprising estimating channel parameters by averaging various symbol sequences.

28. (Previously presented) A method as defined in claim 17; and further comprising preceding the synchronization train by a preamble which is used to adjust an amplitude control of the receiver.

29. (Currently amended) A transmitter for preparing a synchronization train for at least one receiver within a transmission system with use of a data stream with guard intervals for compensating for multi-path propagation, the transmitter comprising a first device selected from the group consisting of a coding device and a modulating device; and insertion device ~~for~~ configured for insertion of a synchronization train, which train is capable of estimating a chronological position of a signal received and/or estimating a center frequency error between the transmitter and a receiver and which train is formed of at least two

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different symbol sequences, said insertion device being embodied such that an alternating, periodic insertion of the synchronization train into the data stream prepared by said fist device can be performed; ~~and~~ a memory device operatively connected to said insertion device for various symbol sequences and for their linkage; and means for evaluating the various symbol sequences to gain their metrics and to ascertain the chronological position fo the signal and/or the center frequency error between the transmitter and the receiver, and selecting as a beginning of a block an index for minimizing the total metrics within a predetermined interval in view of block synchronization.

30.   (Currently amended) A receiver for receiving and evaluating a synchronization train which can be transmitted by a transmitter within a transmission system with use of a data stream with guard intervals to compensate for multi-path propagation, the receiver comprising a sampling memory for a received data stream; a synchronization evaluation device which is operatively connected to said sampling memory and is ~~suitable~~configured for evaluating a synchronization train ~~including~~which train capable for estimating a chronological position of a signal to be received and/or estimating a center frequency error between a transmitter and the receiver and which train is

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formed of at least two different symbol sequences that can be transmitted periodically in alternation with respect to a chronological position and/or a center frequency error within a predetermined interval, and for controlling corresponding reception units for block synchronization, frequency synchronization and/or channel estimation; and means for evaluating the various symbol sequences to gain their metrics and to ascertain the chronological position of the signal and/or the center frequency error between the transmitter and the receiver, and selecting as a beginning of a block an index for minimizing the total metrics within a predetermined interval in view of block synchronization.

31. (currently amended) A communication system using the method of claim 17 and synchronizing at least one or more receivers to a transmitter within a transmission system with the use of a data stream with guard intervals, comprising the steps of inserting with the transmitter a special synchronization train into the data stream at a beginning of a transmission, which train is capable of estimating a chronological position of a signal to be received and/or estimating a center frequency error between the transmitter and the receiver; forming the synchronization train of at least two different sequences which are transmitted in alternation periodically; ascertaining the chronological position of the signal and/or the

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center frequency error between the transmitter and the receiver from a composite term of various symbol sequences within a predetermined interval; for a block synchronization using total metrics of at least two different symbol sequences used as the synchronization train; and selecting as a beginning of a block, whichever index minimizes the total metrics within the predetermined interval and embodied as a radio communication system, a line-connected communication system, or a hybrid communication system with radio components, optical waveguide components and/or line-connected components, said communication system including one transmitter and one receiver assigned to subscribers, with variable transmission and reception modes.

32.   (currently amended) A communication system usingcomprising the transmitter of claim 29 or the receiver of claim 30 and embodied as a radio communication system, a line-connected communication system, or a hybrid communication system with radio components, optical waveguide components and/or line-connected components, said communication system including one transmitter and one receiver assigned to subscribers, with variable transmission and reception modes.

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33. (currently amended) A broadcasting communication system using the method of ~~claim 17 and~~ synchronizing at least one or more receivers to a transmitter within a transmission system with the use of a data stream with guard intervals, comprising the steps of inserting with the transmitter a special synchronization train into the data stream at a beginning of a transmission, which train is capable of estimating a chronological position of a signal to be received and/or estimating a center frequency error between the transmitter and the receiver; forming the synchronization train of at least two different symbol sequences which are transmitted in alternation periodically; ascertaining the chronological position of the signal and/or the center frequency error between the transmitter and the receiver from a composite term of various symbol sequences within a predetermined interval; for a block synchronization using total metrics of at least two different symbol sequences used as the synchronization train; and selecting as a beginning of a block, whichever index minimizes the total metrics within the predetermined interval and embodied as a radio communication system, a line-connected communication system, or a hybrid communication system with radio components, optical waveguide components and/or line-connected components, said broadcast communication system being formed so that an association of a transmission and a reception mode is finally specified.

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34.   (currently amended) A broadcasting communication system ~~using~~comprising the transmitter of claim 29 or the receiver of claim 30 and embodied as a radio communication system, a line-connected communication system, or a hybrid communication system with radio components, optical waveguide components and/or line-connected components, said broadcast communication system being formed so that an association of a transmission and a reception mode is finally specified.

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